

Application No. 10/019,550

REMARKS

Claims 1-20 are pending. By this Amendment, claims 17-20 are canceled and claims 1, 9, 15 and 16 are amended.

The drawings were objected to under 37 C.F.R. § 1.83(a), the claims have been amended to remove the recitation of a "conductive member holding electronic parts thereon". The translation of the application has inserted claim language, i.e., the holding of electronic parts thereon, that is not directly reflective of the invention described in the specification. The conductive member is provided so that a circuit may be etched thereon, it does not, per se, "hold" electric parts thereon. See, for example, the specification at page 6, lines 3-6 where it describes an aluminum plate being formed on the circuit layer side of the ceramic board and page 7, lines 16-19 where it explains that a circuit pattern is formed on the circuit layer side by printing thereon with an etching resist.

Claim 3 was objected to for a minor informality. Appropriate correction has been made.

Claims 1-20 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. In particular, the Office Action states that claims 1-20 are vague and indefinite because the electronic parts have not been shown in the drawings and therefore no structural interrelation can be positively established.

The claims have been amended to remove the reference to electronic parts. Claims 17-20 have been canceled herein without prejudice. It is therefore respectfully submitted that the rejections to claims 1-16 under 35 U.S.C. § 112, second paragraph, be withdrawn.

The Office Action also indicated that claims 3, 5, and 7 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. § 112, second paragraph, and to include

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all of the limitations of the base claim and any intervening claim. Applicant appreciative of notes the indication of allowable subject matter.

Claims 1, 2, 6, 8, 15, 17, and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,033,787 to Nagase et al. in view of U.S. Patent No. 4,700,273 to Kaufman. Claim 4 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Nagase in view of Kaufman and further in view of U.S. Patent No. 5,602,720 to Nishihara et al. Claims 9-14, 16, 18, and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nagase in view of Kaufman and further in view of U.S. Patent No. 6,016,007 to Stanger et al. These rejections are respectfully traversed.

The cited references do not teach or suggest a heat radiating member of aluminum or aluminum alloy *heat-molded directly* on the other surface of the ceramic board, as recited in claim 1 in cooperation with the other recited elements. As identified in the Office Action at page 3, Nagase does not disclose having the heat radiating member directly bonded to the ceramic board. Kaufman discloses at column 1, lines 21-22, that electrically insulating ceramic substrate 8 is "mounted" to a heat sink 10, but Kaufman does not teach or suggest that heat sink 10 comprises aluminum or an aluminum alloy *heat molded directly* to the other surface of the ceramic board.

At least for the reasons set forth above with respect to claim 1, the cited references also do not teach or suggest the combined member of aluminum-ceramics of claim 15, comprising a heat radiating member of aluminum or aluminum alloy *heat-molded directly* on the other surface of each of the ceramic boards, in cooperation with the other recited elements.

The cited references further do not teach or suggest the water cooling jacket of aluminum or aluminum alloy bonded directly on the other surface of the electrically insulated, ceramic board, as recited in claim 9 with the other claimed elements. Neither Nagase nor Kaufman teach or suggest the water cooling jacket of aluminum or aluminum alloy bonded

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directly on the other surface of the electrically insulated, ceramic board, as set forth above with respect to claims 1 and 15. Sanger discloses that cooling assembly 22 includes a housing 24, which is fabricated from an electrically insulating material such as plastic (column 2, lines 61-62). A dielectric cooling fluid such as oil is introduced into the housing to remove heat from the surface of the carrier.

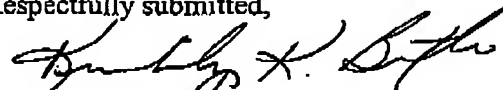
At least for the reasons set forth above with respect to claim 9, the cited references also do not teach or suggest the combined member of aluminum-ceramics of claim 16, comprising a water cooling jacket of aluminum or aluminum alloy bonded directly on the other surface of each of the electrically insulated, ceramic boards, in addition to the other recited claim elements.

Therefore, claims 1, 9, 15, and 16 are allowable at least for the reasons set forth above. Claims 2-8 and 10-14 variously depend from claims 1 and 9 and are therefore also allowable at least for these reasons. The rejections to claims 2-8 and 10-14 are traversed but not expressly argued in light of the allowability of the underlying base claims.

In view of the foregoing, it is submitted that this application is in condition for allowance. Favorable consideration and prompt allowance of the application are respectfully requested.

The Examiner is invited to telephone the undersigned if the Examiner believes it would be useful to advance prosecution.

Respectfully submitted,



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